

Appl. No. 10/799,801
Amendment and/or Response
Reply to Office action of 14 June 2005

Page 2 of 11

Amendments to the Claims:

A listing of the entire set of pending claims (including amendments to the claims, if any) is submitted herewith per 37 CFR 1.121. This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-5. (Canceled)

6. (Previously presented) A method of generating a patterned $\lambda/4$ foil, comprising:
depositing a reactive liquid crystal layer on a substrate;
applying a mask, covering parts of the display corresponding to transmissive parts of the display, while revealing parts corresponding to reflective parts;
photo-polymerizing said reactive liquid crystal layer, through said mask; and
removing non-reacted liquid crystal material.

7. (Previously presented) A method of generating a patterned $\lambda/4$ foil, comprising:
depositing a reactive liquid crystal layer on a substrate;
applying a mask, covering parts of the display corresponding to transmissive parts of the display, while revealing parts corresponding to reflective parts;
performing a first photo-polymerization exposure of said reactive liquid crystal layer, while keeping the reactive liquid crystal layer at a first temperature; and
performing a second photo-polymerization exposure of the reactive liquid crystal layer, while keeping the reactive liquid crystal layer at a second temperature,
one of said photo-polymerization exposures being made through a mask being applied on said reactive liquid crystal layer.

8. (Previously presented) The method of claim 7, whereby said first and second temperatures are chosen such that that the reactive liquid crystal layer is in a nematic liquid crystal phase at said first temperature, and at a temperature above a clearing point of said liquid crystal material.

Appl. No. 10/799,801
Amendment and/or Response
Reply to Office action of 14 June 2005

Page 3 of 11

9. (Previously presented) A method of generating a patterned $\lambda/4$ foil, comprising:
depositing a reactive liquid crystal layer on a substrate; and
providing a patterned orientation layer, corresponding to the desired patterned $\lambda/4$ foil.
10. (Previously presented) The method of claim 9, wherein said patterned orientation layer is generated by means of photo-alignment.
11. (Previously presented) A method of producing a patterned optical foil, comprising:
providing a film of reactive liquid crystal material;
providing a pattern for processing the reactive liquid crystal material that defines first area segments and second area segments of the film; and
processing the reactive liquid crystal material via the pattern to produce:
a first optical retardation in the first area segments, and
a second optical retardation in the second area segments;
wherein
the first optical retardation is substantially different from the second optical retardation.
12. (Currently amended) The method of claim 11, wherein
the first optical retardation is configured to provide an optical twist in the range of 80 to 100 degrees, and
the second optical retardation is configured to provide an optical twist at or near zero degrees.
13. (Previously presented) The method of claim 11, wherein
the first optical retardation is substantially determined by a thickness of the reactive liquid crystal material.

Appl. No. 10/799,801
Amendment and/or Response
Reply to Office action of 14 June 2005

Page 4 of 11

14. (Previously presented) The method of claim 11, wherein
the processing of the reactive liquid crystal material via the pattern includes
photo-polymerizing the reactive liquid crystal material in the first area
segments, and
substantially removing the reactive liquid crystal material from the
second area segments.
15. (Previously presented) The method of claim 11, wherein
the processing of the reactive liquid crystal material via the pattern includes:
photo-polymerizing the reactive liquid crystal material at a first
temperature at which the reactive liquid crystal material is in a nematic liquid crystal
phase, and
photo-polymerizing the reactive liquid crystal material at a second
temperature that is above a clearing point of the reactive liquid crystal material.
16. (Previously presented) The method of claim 11, wherein
the pattern corresponds to an orientation layer, and
the processing of the reactive liquid crystal material via the pattern includes:
orienting the reactive liquid crystal material at a first planar orientation,
and
orienting the reactive liquid crystal material at a second planar
orientation that is substantially different from the first planar orientation.
17. (Previously presented) The method of claim 16, wherein
the first planar orientation differs from the second planar orientation by about
45 degrees.

Appl. No. 10/799,801
Amendment and/or Response
Reply to Office action of 14 June 2005

Page 5 of 11

18. (Previously presented) The method of claim 11, wherein
the processing of the reactive liquid crystal material via the pattern includes:
providing a first birefringence to the first area segments, and
providing a second birefringence to the second area segments.
19. (Previously presented) The method of claim 18, wherein
the second birefringence is near zero.
20. (Previously presented) The method of claim 11, wherein
the first area segments and second area segments form pairs of segments
that are arranged as a two-dimensional array of pairs of segments.
21. (Currently amended) The method of claim ~~21~~ 20, wherein
the array of pairs of segments corresponds to an array of pixels of a display
device.
22. (Currently amended) The method of claim ~~21~~ 20, wherein
the second area segments are substantially transparent.
23. (Currently amended) A method as claimed in claim 11, wherein
each pair of first area segments and second area segments corresponds to a
pixel of an array of pixels of a display device.
24. (Previously presented) The method of claim 23, further including:
providing a pair of polarizers that sandwich the array of pixels to form the
display device.

Appl. No. 10/799,801
Amendment and/or Response
Reply to Office action of 14 June 2005

Page 6 of 11

25. (Previously presented) The method of claim 23, wherein
each pixel includes electrodes that are configured to control the liquid crystal material.

26. (Currently amended) The method of claim 23, wherein
the first optical retardation is configured to provide an optical twist in the range of 80 to 100 degrees, and
the second optical retardation is configured to provide an optical twist at or near zero degrees.

27. (Previously presented) The method of claim 23, wherein
the first optical retardation is substantially determined by a thickness of the patterned optical film.